

PROGRAMMATIC INITIAL ENVIRONMENTAL EXAMINATION (PIEE)

Project/Activity Name:	EE COVID-19 Programmatic	IEE
Geographic Location(s) (Country/Region):	EE Regional	
Implementation Start/End Date (FY or M/D/Y):	April 2020- March 2022	
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Tracking ID of Related RCE/IEE (if any):		
ORGANIZATIONAL/ADMINISTRATIVE DATA:		
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Other Affected Operating Unit(s):	GH, E3, Lab, DCHA	
Lead BEO Bureau:	EE	
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Prepared by and Date:	ME, AFR & DCHA, ECOS; April 2020	
ENVIRONMENTAL COMPLIANCE REVIEW DATA:		
Analysis Type:	IEE	
Environmental Determination(s):	Negative Determination	
IEE Expiration Date (if applicable):	March 2022	
Additional Analyses/Reporting Required:	SIEE	
Climate Risks Identified (#):	CRM to be conducted by OUs for SIEEs, refer to Annex 7	

SUMMARY OF FINDINGS

PURPOSE AND SCOPE

This COVID-19 Programmatic Initial Environmental Evaluation (COVID-19 PIEE) is intended to provide USAID missions and regional programming in the Europe and Eurasia Bureau with preliminary analysis and recommendations to inform and facilitate their compliance with the Agency's mandatory Environmental Procedures (see 22 CFR 216 and ADS 204) as they initiate new interventions in response to the COVID-19 pandemic. The intent of the document is to streamline the coverage of new interventions in response to COVID-19. This regional document captures generally-applicable analysis of potential environmental impacts and recommended mitigation measures that can be utilized as a resource for further detailed analysis at the Mission-level. This PIEE's findings will be operationalized through a Supplemental IEE (SIEE) by each operating unit that references the analysis herein. These SIEEs can, in most cases, be very brief. It is the intent that the SIEE will:

- recommend the necessary threshold decision for new awards being issued expressly for COVID-19 response actions; and
- avoid the need to amend existing IEEs/RCEs for ongoing mechanisms at the Missionlevel to which COVID-19 response interventions are being added.

LIMITATIONS OF THE EE COVID-19 PIEE

This EE COVID-19 PIEE fulfills the narrow task of helping to meet the environmental impact screening expectations of the Agency's Environmental Procedures. It *does not* provide official guidance on how USAID programs and operating units should respond to COVID-19. The COVID-19 Task Force is the source of such official guidance.

ACTIVITY TYPES

This COVID-19 PIEE's analysis addresses the following activity types that could be expected as near-term interventions for COVID-19 responses:

- 1. <u>Communications, outreach, analysis, planning</u>, and other actions that typically have no impact on the environment.
- 2. <u>Laboratory or research strengthening</u> (e.g., vaccine research, equipment purchases, operation of laboratories, procurement and supply management, waste management)
- 3. <u>Support to formal and informal/temporary healthcare facilities and systems</u> (e.g., provision of equipment, operation of facilities, procurement and supply management, support for waste management);
- 4. Support for use of disinfectants/germicides;
- 5. WASH (e.g., provision of water, soap and hygiene kits to households);
- 6. Food security (e.g., food distribution);
- 7. <u>Small-scale construction and rehabilitation</u> (e.g., installation of mobile units, latrine construction, temporary hospital/health post construction);
- 8. Small and medium enterprises in support of COVID-19 response (e.g., PPE production,

sanitizer production).

This list is representative, not exhaustive. Other activities undertaken in response to COVID-19 that are not addressed in this COVID-19 PIEE can be addressed by the subject mission through their Supplemental IEE.

THRESHOLD DETERMINATION

A **Negative Determination with Conditions** is recommended for all activity types implemented in response to COVID-19. No categorical exclusions are recommended for these activities because even the implementation of activities that would typically qualify for a Categorical Exclusion presents the risk of COVID-19 transmission through workplace exposure if during implementation of those activities appropriate precautions are not taken.

Pursuant to 22 CFR 216.2(b)(1)(ii), the COVID-19 response activities covered herein do not qualify for an Exemption from environmental examination without Assistant Administrator or Administrator clearance and Council on Environmental Quality consultation.

CONDITIONS OF THE IEE

- As a streamlined way to meet their environmental compliance requirements, USAID
 Operating Unitis (OUs) are requested hereby to operationalize this COVID-19 PIEE
 through the development and submission for BEO concurrence of a <u>Supplemental IEE</u>
 (<u>SIEE</u>) for OU-specific COVID-19 response activities.
- 2. This PIEE provides a preliminary analysis of environmental impacts and recommends a range of environmental impact mitigation measures (summarized in Section 3 and 5 and detailed in Annex 2 and 3). The SIEEs prepared by EE OUs will direct their partners to develop and implement an Environmental Mitigation and Monitoring Plan (EMMP) based on those measures.

CLIMATE RISK MANAGEMENT

While a full Climate Risk Management screening was not completed for this COVID-19 PIEE, a preliminary CRM screening was prepared to assist Missions in completing the CRM screening as part of the SIEE. Please refer to Annex 7 for further details.

USAID APPROVAL OF INITIAL ENVIRONMENTAL EXAMINATION USAID APPROVAL OF INITIAL ENVIRONMENTAL EXAMINATION

PROJECT/ACTIVITY NAME: EE COVID PROGRAMMATIC IEE

Approval:	Margot B. Ellis	04/09/2020
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DISTRIBUTION:

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INITIAL ENVIRONMENTAL EXAMINATION

1.0 PROJECT/ACTIVITY DESCRIPTION

1.1 PURPOSE OF THE PROGRAMMATIC IEE

This Europe and Eurasia Bureau (EE) COVID-19 Programmatic Initial Environmental Evaluation (EE COVID-19 PIEE) is intended to provide EE missions and regional programs with preliminary analysis and recommendations to inform and facilitate their compliance with the Agency's mandatory Environmental Procedures (see 22 CFR 216 and ADS 204) as they initiate new interventions in response to the COVID-19 pandemic. To ensure cross-Agency coordination and a consistent approach, this PIEE was developed in consultation with BEO teams in the other Regional and Pillar Bureaus, with the Agency Environmental Coordinator, and with the General Counsel, E3.

This COVID-19 PIEE is a critical element of USAID's mandatory environmental review and compliance process meant to achieve environmentally sound design and implementation. Additional details about the purpose of this COVID-19 PIEE include the following:

- The intent of the document is to streamline the coverage of new interventions in response
 to COVID-19 through a single Middle East regional document and instruct the
 development of a Supplemental IEE (SIEE) by each operating unit that references the
 analysis herein.
- 2. For ongoing activities already covered by an environmental compliance document (Initial Environmental Examination or Request for Categorical Exclusion (RCE)) that will be asked to initiate new COVID-19 response interventions, this COVID-19 PIEE is intended to avoid the need to amend those existing IEEs/RCEs. Instead, the intent is that the operating units's single SIEE (supplemental to this COVID-19 PIEE) will serve to cover those newly-added interventions. The SIEE should include identification of new elements needed in a partner's Environmental Mitigation and Monitoring Plan (EMMP).
- 3. For COVID-19 response actions planned through *new awards* not yet covered by an IEE or RCE, the operating units's SIEE will provide the necessary threshold decision for those awards' COVID-19 response actions, based upon the analysis and recommendations in this PIEE. To the extent those awards are exclusively focused on the COVID-19 response, the SIEE should suffice to provide environmental compliance coverage.
- 4. This COVID-19 PIEE is not a decision document. While this document recommends threshold decisions and mitigation measures, the Environmental Procedures require that an operating unit's Mission Director or Deputy Assistant Administrator propose the threshold decision for an activity. An operating unit's SIEE (or other IEE) can incorporate the analysis and recommendations of this COVID-19 PIEE by reference and thereby operationalize them in that decision document. Efficiencies will be achieved by operating units not needing to repeat the analysis found in this COVID-19 PIEE.

This COVID-19 PIEE provides an examination of the potential environmental impacts from activities expected to be a part of USAID's COVID-19 responses, as well as recommended threshold determinations and appropriate mitigating measures for those activities. The document's analysis addresses a list of illustrative activities. Other activities undertaken in response to COVID-19 that are not addressed in this COVID-19 PIEE can be addressed by the subject operating units through their Supplemental IEE.

Supplemental IEEs (SIEEs)

Each EE operating unit that intends to initiate a response to the COVID-19 pandemic should prepare an SIEE (one per operating unit) following the template included in this COVID-19 PIEE. The SIEE will:

- Identify the expected COVID-19 response activities;
- Describe additional mitigating actions that implementing partners will be asked to undertake and to include in their EMMPs;
- Describe the new activities being initiated in response to COVID-19 that are not covered by a current IEE or RCE, and recommend threshold determinations and mitigating measures for those activities. The <u>SIEE</u> will be the document that provides the mandatory environmental compliance review and threshold decision(s) for those activities.
- An SIEE is NOT needed if all COVID-19 response actions will be undertaken through existing activities for which a current IEE already covers the anticipated responses, as determined by the AOR/COR in consultation with the Mission Environmental Officer (MEO).

This COVID-19 PIEE aims to help operating units to more rapidly and easily respond to the Agency's mandatory Environmental Procedures, avoiding delays in initiation of COVID-19 response actions.

Other Relevant Guidance

This document must be viewed in the full context of guidance, recommendations, and policy direction being developed and issued by USAID and by partner governments regarding the COVID-19 pandemic. This COVID-19 PIEE references Agency guidance and procedures available at the time of preparation. In preparing their SIEEs (or other IEEs) related to their COVID-19 response actions, USAID operating units should remain alert to new guidance, recommendations, and policy that may relate to the design and implementation of those actions.

1.2 INTERVENTION CATEGORIES/ACTIONS

For purposes of this COVID-19 PIEE, USAID's COVID-19 response is expected to include work in the support areas listed below. This list is illustrative, not exhaustive; any response activities not found in this list can still be considered in an operating unit's SIEE.

- 1. <u>Communications, outreach, analysis, planning</u>, and other actions that typically have no impact on the environment;
- 2. Laboratory or research strengthening
- 3. Support to formal and informal/temporary healthcare facilities and systems;
- 4. Support for use of disinfectants/germicides;
- 5. WASH;
- 6. Food security;
- 7. Small-scale construction and rehabilitation;
- 8. Small and medium enterprises in support of COVID-19 response.

1.3 ACTIVITY OVERVIEW

The 2020 COVID-19 pandemic is a new disease that is distinct from other respiratory illnesses. Although coronavirus and influenza infections may present with similar symptoms, the virus responsible for COVID-19 is different with respect to community spread and severity. There is still much to discover about the disease and its impact in different contexts. Preparedness, readiness, and response actions -- including physical distancing -- will continue to be driven by rapidly accumulating scientific and public health knowledge. It is likely that USAID interventions related to COVID-19 will be driven by Agency-wide efforts and Mission-specific interventions in the form of new activities and pivots to existing activities.

On March 18, 2020, the U.S. Government announced the release of \$62 million from the Emergency Reserve Fund (ERF) for Contagious Infectious-Disease Outbreaks at USAID to address the pandemic of COVID-19. COVID-19, the disease caused by the novel coronavirus SARS-CoV-2, is at the center of a widespread global pandemic. In responding to the global public health emergency, USAID is working to boost the capacity of laboratories across the developing world in order to ensure future preparedness against this novel coronavirus (and other future emerging infectious diseases). USAID has issued a determination to make the funds from the ERF available to combat the increasing health threat in developing countries affected by, or at high-risk from, the COVID-19 pandemic. This funding fulfills the U.S. Department of State's pledge of up to \$100 million for international efforts to combat COVID-19.

Missions and Bureaus, through new and existing mechanisms, may support the development of approaches and tools related to preparedness, readiness, communication, supplies and equipment, training, capacity building, and humanitarian response actions driven by the rapidly accumulating scientific and public health knowledge. To help immediately combat COVID-19, USAID interventions aim to strengthen host governmental and IP COVID-19 preparedness and response to reduce transmission and, to the extent possible, limit the impact of the virus. USAID, with the support of its partners, is taking steps to organize an effective response to contain and end this outbreak, while protecting USAID and partner staff. This effort includes

logistics, communication, developing a response plan and - with an unknown time frame - the eventual vaccination strategy.

1.4 INTERVENTION CATEGORIES/ACTIONS

To facilitate the environmental impact evaluation for this COVID IEE, this document has been organized into primary activity categories or "Activity Types." An Activity Type is not an individual, named activity, but instead represents a range of types of predictable and similar activities that will require similar monitoring and mitigation measures.

The COVID-19 specific Activity Types analyzed in this PIEE are noted in Table 1:

TABLE 1: ILLUSTRATIVE ACTIVITIES

Activity Type 1 – Communications, outreach, analysis, planning

Activity Type 2 - Laboratory or research strengthening

Activity Type 3 - Support to formal and informal/temporary healthcare facilities and systems

Activity Type 4 – Use of disinfectants/germicides

Activity Type 5 – WASH

Activity Type 6 – Food Security

Activity Type 7 - Small Scale Construction and Rehabilitation

Activity Type 8 - Small and medium enterprises in support of COVID-19 response

2.0 BASELINE ENVIRONMENTAL INFORMATION

2.1 LOCATIONS AFFECTED AND ENVIRONMENTAL CONTEXT (ENVIRONMENT, PHYSICAL, CLIMATE, SOCIAL, THREATENED AND ENDANGERED SPECIES)

Within the Europe and Eurasia (E&E) region, the pandemic context may have complicating factors such as insufficient health care facilities and supplies, differing or confusing government guidance and mandates, and limited capacity to address disease spread (e.g., stay-at-home or quarantine orders). Outbreak scale, populations affected, local conditions and capacity for response, and infrastructure will strongly dictate the types of actions necessary and the scale of USAID's and other donor's interventions. It is likely that interventions will take place in healthcare facilities (existing and temporary), private homes, schools, religious institutions, and other public and private buildings.

As outbreaks progress, communities may face additional challenges where USAID commonly operates. For example, mandated business closures may result in loss of household income, increased poverty, and food insecurity. The longer term social impacts are still unknown.

As the world focuses on addressing the coronavirus pandemic, it is important once we emerge from response and transition to recovery that society considers the ramifications of continuing "business as usual." COVID-19 is just the latest in a series of zoonotic diseases which will continue to plague society. According to UNEP, diseases passed from animals to humans are on the rise, as the world continues to see unprecedented destruction of wild habitats by human activity. Scientists suggest that degraded habitats may encourage more rapid evolutionary processes and diversification of diseases, as pathogens spread easily to livestock and humans. UNEP's Frontiers 2016 Report on Emerging Issues of Environment Concern shows zoonoses threaten economic development, animal and human well-being, and ecosystem integrity.

2.2 APPLICABLE AND APPROPRIATE PARTNER COUNTRY AND OTHER INTERNATIONAL STANDARDS (E.G., WHO), ENVIRONMENTAL AND SOCIAL LAWS, POLICIES, AND REGULATIONS

Since this EE COVID-19 PIEE addresses the Europe and Eurasia region, the SIEEs will specify applicable standards, laws, policies, and regulations for each country in relation to the COVID-19 outbreak. During the pandemic, standards can quickly evolve, and therefore, local officials should be consulted to identify applicable laws, policies, and regulations at the time of the intervention.

The USG has issued guidance for the U.S. which, as appropriate, can serve as additional reference for USAID activities. Local authorities are also likely to develop their own guidance and protocols. Online information may change as the knowledge about an outbreak evolves, therefore, any references should be regularly consulted.

- CDC's <u>Cleaning and Disinfection of Households</u>: Interim Recommendations for U.S. Households with Suspected or Confirmed Coronavirus Disease 2019
- CDC's Coronavirus Disease Site
- CDC's How to Protect Yourself
- CDC's Information for HealthCare Professionals
- CDC's Information for Laboratories
- CDC's <u>Guideline for Disinfection and Sterilization in Healthcare Facilities</u>, 2008 Update: May 2019
- EPA's List N: Disinfectants for Use Against SARS-CoV-2
- WHO's Country & Technical Guidance Coronavirus disease (COVID-19)

3.0 ANALYSIS OF POTENTIAL ENVIRONMENTAL IMPACT

Each of the activities in this PIEE are evaluated for the potential direct, indirect, and cumulative environmental and social (i.e., health and well-being) impacts. Activities are generally associated with those taking place at health facilities, warehouses, in offices, and in transport as well as the natural environment when related to community disinfection, waste management, WASH provision or construction.

In general, the anticipated environmental impacts of COVID-19 response actions include the following:

Human health and safety impacts exist associated with:

- Use and waste management of toxic chemicals used in laboratories:
- Exposure to expired or unusable commodities and other healthcare wastes accessed by the community through scavenging or inappropriate disposal;
- Fumigation of food commodities;
- Use of disinfectants/germicides in health facilities, businesses, public spaces, and households;
- Occupational safety of construction, laboratory, healthcare, and sanitation workers, and during Small and Medium Enterprise (SME) production activities; and
- Exposure to COVID-19 at gathering, informational sessions, and during essential work.
- Improper siting of temporary facilities

Environmental impacts exist associated with:

- Disposal of pharmaceutical and other hazardous waste:
- Use of disinfectants and release to the environment during ULV fogging and surface cleaning;
- Small scale construction such as dust, noise, solid waste, ground and surface water contamination:
- Improper siting of temporary facilities and services and;
- SME production activities

The potential environmental impacts of the activity types considered in this COVID-19 PIEE are described in detail in Annex 2 and provide a preliminary analysis for Mission's to utilize in preparing their SIEEs.

3.1 CLIMATE RISK MANAGEMENT

Climate Risk Management (CRM) aims to assess, address, and adaptively manage climate risks that may impact the ability of USAID programs to achieve objectives. Reducing climate risks to project or activity implementation can improve development outcomes. Agency requirements for CRM for projects and activities are described in <u>Climate Risk Management for USAID Projects and Activities Mandatory Reference for ADS Chapter 201</u>.

Climate and weather shocks and stressors can cause direct and indirect negative impacts to human health, such as heat waves leading to increased heat related illness, or changing temperatures and rainfall patterns changing the distribution of infectious diseases. These impacts may magnify the severity of COVID-19. Furthermore, climate and weather shocks and stressors may also weaken health systems, and these systems' ability to respond to COVID-19.

The most vulnerable populations are usually the most impacted by climate and weather shocks and stressors, potentially putting more people at risk of serious illness due to COVID-19.

While a full Climate Risk Management screening was not completed for this COVID-19 PIEE, a preliminary CRM screening was prepared to assist Missions in completing the CRM screening as part of the SIEE. Please refer to Annex 7 for further details.

As part of any COVID-19 response in the E&E region involving establishment of temporary facilities, siting of such facilities will be considered to avoid areas prone to flooding, landslides, etc.

4.0 ENVIRONMENTAL DETERMINATIONS

A **Negative Determination with Conditions** is recommended for all activity types implemented in response to COVID-19. No categorical exclusions are applicable to this activity because even the implementation of activities that would typically qualify for a Categorical Exclusion, such as a communication activity, presents the risk of COVID-19 transmission if the implementation of those activities would congregate people.

Pursuant to 22 CFR 216.2(b)(1)(ii), the COVID-19 response activities covered herein do not qualify for an Exemption from environmental examination without Assistant Administrator or Administrator clearance and Council on Environmental Quality consultation. As noted in ADS 204, the International Disaster Assistance (IDA) Exemption applies only to IDA-funded activities, or non-IDA-funded activities that meet ALL of the criteria as described in ADS 204.3.10 c 1-4. The Agency is conducting proactive advance planning, and therefore, ALL of the non-IDA Exemption criteria do not apply, i.e., "This (Exemption) does not include situations in which the need for the activity was foreseeable and has become urgent merely as a result of the Agency's lack of advance planning."

5.0 CONDITIONS AND MITIGATION MEASURES

5.1 CONDITIONS

The environmental determinations in this COVID-19 PIEE are contingent upon full implementation of the following general implementation and monitoring requirements, as well as ADS 204 and other relevant requirements.

- USAID OUs will operationalize this COVID-19 PIEE through the development and submission for BEO concurrence of a <u>SIEE</u> for OU-specific COVID-19 response activities.
- This PIEE provides a preliminary analysis of environmental impacts and recommends a range of risk mitigation measures (summarized in Section 3 and 5 and detailed in Annex 2 and 3). With reference to this COVID-19 PIEE, the SIEEs prepared by EE OUs will direct their partners to develop and implement an EMMP based on those measures.

General Conditions Recommended for COVID-19 SIEEs

Activities should at a minimum include the following conditions:

- Interventions must build awareness, providing and requiring training and capacity building around best environmental and health and safety practices in the context of COVID-19 pandemic;
- Follow Agency and international guidelines for COVID-19 response (see Section 2.2 for examples);
- Ensure access to technical expertise for implementing sound environmental and health and safety practices for COVID-19 activities;
- Comply with relevant host country and international standards and regulations; and
- Develop and implement EMMPs and planning documents for actions with potential environmental impacts such as drinking water contamination, medical waste disposal, misapplication of hazardous materials for disinfection, etc.

ANNEXES

- 1. SIEE Template
- 2. Illustrative Environmental Impacts of Activities
- 3. Illustrative Mitigation Measures for Use in SIEEs
- 4. Approved Disinfectants and the Pesticide Procedures Analysis
- 5. Practical Guidance for the Use of Disinfectants
- 6. COVID-19 Prevention: Enhanced Cleaning and Disinfection Protocols
- 7. Climate Risk Management

ANNEX 1: SIEE Template

ANNEX 2. ILLUSTRATIVE ENVIRONMENTAL IMPACTS OF ACTIVITIES

Activity

Potential environmental and social impacts

Activity 1 Communications, outreach, analysis, planning, and other actions that typically have no impact on the environment

No categorical exclusions are recommended for this category because even the implementation of activities that would typically qualify for a Categorical Exclusion, such as a communication activity, presents the risk of COVID-19 transmission if the implementation of those activities would tend to congregate people.

Indirect social impacts are also possible depending on methodology and approach for data collection and surveillance. Illustrative examples include:

- Vector transmission between workers and the community if health and safety protocols (e.g., social distancing and hygiene behaviors) are not followed.
- Risk of social unrest or physical harm to data collectors in locations where public sensitization
 has not previously taken place or public misinformation results in fear of outsiders (as
 witnessed during the Ebola crisis).

Activity 2 — Laboratory or research strengthening

2.1 Support or provide technical assistance to **develop processes**, **SOPs**, **and standards** for specimen transport, laboratory diagnostics, and services

These actions primarily involve research, analyses, and information sharing actions that have no direct physical impact on the environment; however, if these activities are not cognizant of the environmental impact associated with carrying out the SOPs or standards, localized environmental harm (spread of pathogens, air pollution, contamination of soil and water) is possible due to inappropriate waste management, treatment of specimens that create disease transmission pathways to the community or workers, spills or occurrence of accidents.

2.2 Training, technical assistance, and capacity building of professional and paraprofessionals on laboratory establishment and/or operation, including training workers in methods for PPE use, diagnostics, and waste management

- a. Laboratories carry both environmental and human health and safety risks to the local community and workers. Training, technical assistance, and capacity building can directly lead to generation of wastes during the training events and demonstrations. Indirectly, the support as it is instructional in nature, can also lead to environmental or health and safety impacts once the training is complete (e.g., they lead directly to how staff manage wastes). Incorrect PPE use, sample acquisition, handling, storage and management of healthcare waste can spread the disease through several mechanisms. Transmission of disease through infectious waste and environmental risks of used test kits and reagents are the greatest and most immediate threat. Impacts related to waste management are addressed in Section 2.3.
- b. Additionally, water supply of laboratories, if not properly treated, can also result in discharge of pathogens or chemicals into groundwater or surface waters. See infrastructure Section

10 if support extends to laboratory water systems. 2.3 Operation of a laboratory a. Negative environmental impacts associated with laboratory including all critical components testing, operation, and research include the use of hazardous such as procurement, storage. and toxic chemicals and result in the generation of various solid management, and disposal of and hazardous wastes, including chemical and biological wastes. Air emissions resulting from laboratory operations may laboratory commodities and samples, including, but not limited generate hazardous air pollutants that can be harmful to human to diagnostic kits, laboratory health and the environment. In addition, water used during supplies, reagents, and discarded laboratory research may become contaminated and require PPE control or treatment prior to discharge to avoid contamination of water systems and surrounding water systems used by the local community. Sanitation of the laboratory also may result in hazardous or chemical wastes requiring neutralization or special treatment (e.g., bleaches, organic solvents, soaps). b. There are also environmental risks associated with the storage and disposal of commodities, reagents, and laboratory supplies. Unused or untested commodities may also require disposal, treatment, or storage. c. Health and safety standards are also important to consider at laboratories as workers may contact hazardous chemicals, which could be neurotoxic, carcinogenic, acutely toxic, or

2.4 Contribution to research of vaccine and treatment protocol development

USAID may contribute or be a minor donor to the overall effort of vaccine or treatment development and scaling. Research in a controlled environment in WHO and/or ISO certified laboratories contribute to overall waste burden, but it is expected that these sanctioned facilities proper handle waste and prevent discharge of pathogens or chemicals to the environment. Vaccine development and bioengineering associated with it carries unknown environmental and social risks.

genotoxic, etc. Additionally, laboratory work can have safety issues associated with it from equipment operation, use of syringes, and broken glassware and exposure to pathogens in

Activity 3 – Support to formal and informal/temporary healthcare facilities and systems (see Activity 1 for other support without environmental implications)

patient samples.

3.1 Support or provide technical assistance to **develop processes, SOPs, and standards** for aspects of healthcare such as waste management, disinfection (See Annex 5 and 6), specimen transport and storage, rapid diagnostics, and service delivery

These actions primarily involve research, analyses, and information sharing actions that have no direct physical impact on the environment; however, if these activities are not cognizant of the environmental impact associated with carrying out the SOPs or standards, localized environmental harm (spread of pathogens, air pollution, contamination of soil and water) is possible due to inappropriate waste management, treatment of specimens that create disease transmission pathways to the community or workers, spills or occurrence of accidents.

3.2 Training, technical assistance, and capacity building of health care workers, staff, community healthcare

Support to health facilities carry both environmental and human health and safety risks to the local community and workers. Training, technical assistance, and capacity building can directly lead to generation of wastes during the training events and

workers, and volunteers in areas of PPE use, waste management, procurement, storage, and disposal of commodities, and disinfection (See Annex 5 and 6) demonstrations. Indirectly, the support as it is instructional in nature, can also lead to environmental or health and safety impacts once the training is complete (e.g., they lead directly to how staff manage wastes). Incorrect PPE use, sample acquisition, handling, storage and management of healthcare waste can spread the disease through several mechanisms. Transmission of disease through infectious waste and environmental risks of used test kits and reagents are the greatest and most immediate threat. Impacts related to waste management are addressed in Sub-activity 3.3.

3.3 Procurement or logistics support (distribution and transport) for healthcare commodities, diagnostic kits, PPE, and equipment for response to emerging threats

- a. Procurement and logistics support of health commodities can have environmental and social impacts associated with the management of expiring, damaged, or oversupply of commodities. More specifically,
 - -Inappropriate supply or lack of adherence to established supply management protocols (e.g., first in first out) may result in increased waste.
 - -An oversupply of health commodities increases the probability of products expiring on the shelf and requiring disposal or containment. Damaged and expired pharmaceuticals create a waste stream that may include potentially hazardous waste along with its associated environmental impacts.
 - -The management of large quantities of pharmaceuticals or healthcare supplies also creates greater potential for diversion during waste handling or by theft of the commodities, which then poses a risk to the local community.
 - -Procurement or acceptance of donated health commodities that are defective, expired, or counterfeit may lead to public health impacts due to the potential of these unsafe and/or ineffective commodities to be accessed by consumers. Adverse health and environmental impacts may also occur if defective, expired, or counterfeit health commodities are not properly managed.
- b. The production of the commodity, its packaging, and the shipping can result in non-recyclable materials, plastic wastes and chemical waste.
- c. Production of commodities may require significant energy and water use, which contribute to the overall environmental footprint of the product.
- d. Production and shipping can also contribute to greenhouse gas (GHG) emissions as well as waste management including incinerator use and emissions from landfills.

3.4 Assessment of incineration and waste disposal capacity for health entities to ensure proper disposal and limit vectors of

Assessments do not directly have environmental or health impacts; however, recommendations arising from those assessments, can result in environmental harm when inappropriate. As noted in Sub-activities 3.2 and 3.3, there are

disease via improperly managed healthcare waste:

health and soil, water, and air pollution risks from inappropriate waste management.

3.5 Procurement, distribution, and use of waste management equipment and systems

Improper handling, storage and disposal of the waste generated in these facilities or activities can spread disease through several mechanisms. Transmission of disease through infectious waste is the greatest and most immediate threat from healthcare waste. Waste management is important in mitigating risk, but waste management in its procedures, equipment operation, and maintenance has its own associated risks.

As in many developing countries, waste management is impaired by the lack of waste separation often resulting in incomplete or ineffective treatment from inappropriate treatment or destruction processes applied to inappropriate types, moisture content, or volume of waste. If waste is not treated in a way that destroys the pathogenic organisms, dangerous quantities of microscopic disease-causing agents-viruses, bacteria, parasites or fungi-will be present in the waste. This includes improperly designed or operated incinerators.

Disposal of waste via landfilling may lead to leaching of hazardous waste into the soil and surrounding water sources. In addition, improperly managed or unsecured landfills may allow scavengers to collect disposed health commodities and reuse them or circulate in the community, which could result in health impacts.

Waste handlers are particularly at risk as they have exposure to possible punctures and other breaks in the skin, mucous membranes in the mouth, by being inhaled into the lungs, being swallowed, or being transmitted by a vector organism. Handlers also often maintain equipment so may be exposed to ash which can contain heavy metals and PAHs. Others who come in direct contact with the waste are also at risk including healthcare workers, cleaning staff, patients, visitors, waste collectors, disposal site staff, waste pickers, etc.

Defunct and obsolete equipment can pose a health and safety threat and serve as a location for breeding vectors or are a safety risk to children of scavengers when not disposed of properly or recycled. Often this equipment is placed behind local health facilities and is never properly dismantled and removed.

Activity 4 - Support for the use of disinfectants/germicides

- 4.1 Procurement, distribution, training, and use of **germicides** on surfaces
- -in community setting
- -businesses
- -in private homes

Environmental and health risks of using germicides are dependent on the specific germicide used, method of application, and target, among numerous other factors. In the case of community use, applicators may be less knowledgeable of the risks, appropriate preparation (e.g., dilution) of the germicide. Additionally, they may inappropriately apply the germicide (e.g., not adhering to contact time requirements). Therefore, specific risks cannot be identified but a very general review of associated risks is presented below.

Occupational and public exposure risks. Use of germicides by the public and community workers may increase the risk of these persons for developing respiratory illnesses (e.g., asthma) and contact dermatitis, especially when engineering controls (e.g., closed containers, adequate ventilation) and PPE (e.g., gloves) are not being used. Risks inherent to making homemade products. Where manufacturer products are not available, homemade germicides are sometimes prepared. Improper use of chemicals may cause allergic reactions and dermatitis, mixing some solutions, such as cleaning materials that contain ammonia and chlorine may form a deadly gas, some chemicals are irritating to eyes and to the respiratory system. Some of the chemical disinfectants are flammable and explosive. **Ineffective treatment risk.** Pathogens can be ineffectively treated if there is use of an inappropriate product (i.e., pathogens if intrinsically resistant), application of the product improperly (i.e., incorrect duration, concentration, pH, temperature), failure to remove inorganic debris (i.e., improper cleaning) prior to disinfection, insufficient contact of the disinfectant with the surface to be treated, insufficient concentration of active product. **Environmental risks.** Germicides are selected for their toxic properties and therefore these products may harm beneficial microorganisms, plant and animal life. Some chemicals can contribute to pollution of air, water and soil and some may persist and bioaccumulate during their manufacture, use, or disposal. ULV and fogging in public spaces, including city streets, public 4.2 Procurement, distribution, transportation, schools, community buildings, mosques and training, and use of ULV or churches is typically conducted using ultra-low concentration fogging germicides sodium hypochlorite (dilute bleach); however, the active -in a community setting ingredient used may vary depending on the type of pathogen. The environmental and health risks associated with germicides are dependent on the specific germicide used, method of application, and target, among numerous other factors. Therefore, specific risks cannot be identified but a very general review of associated risk is provided in Sub-activity 4.1. ULVs in particular can pose respiratory threat to workers spraying and to certain sensitive populations, such as those with respiratory illness. Some skin sensitivity may also be possible in the general population, and patients if inappropriately conducted in the healthcare setting. See Sub-activity 4.1 4.3 Procurement, distribution, training, and use of germicides -on surfaces in a medical facility setting

4.4 Procurement, distribution, training, and use of **ULV or fogging germicides**

- in a health facility setting

Environmental and health risks to germicides are dependent on the specific germicide used, method of application, and target, among numerous other factors. Therefore, specific risks cannot be identified but a very general review of associated risk is provided in Sub-activity 3.4.

ULVs in particular can pose respiratory threat to workers and patients if inappropriately conducted in the healthcare setting. Older methods of fogging such as the use of formaldehyde, phenol-agents, and quartenary ammonium have shown adverse effects on health in facilities and many are no longer approved by EPA. Newer methods may not have entirely evaluated associated environmental risks.

Activity 5 – WASH (see Category 7 for construction of latrines)

5.1 Distribute WASH supplies to households and pre-position disinfection equipment and related items

Provision of soap, hygiene kits and other WASH supplies generally have minimal impact on the environment as solely solid waste are the primary impact. However, distribution of disinfection supplies such as those for surfaces, in the case of outbreaks, or chlorine tabs for drinking water have greater potential risks. Undertreatment of drinking water supplies or disinfection sprays that are too dilute may lead to resistance or may contribute to disease transmission if the water is perceived safe. Overtreatment could result in gastrointestinal issues and dermatitis in humans and localized mortality events of aquatic invertebrates and fish.

5.2 Supply drinking water via installation of household point of use treatment systems

Point of use water treatment is a short-term measure to provide safe drinking water from unsafe polluted water sources until a longer-term solution is available to the population. It presents strong benefits if required treatment levels and procedures are followed. Health risks related to excessive dosing of water are minimal; the risk is rather of under-treatment and recontamination (most likely to occur during transportation or storage) that renders the POU treatment ineffective.

5.3 **Technical assistance** for the design and implementation of supplemental water and sanitation facilities

Poor design, operation, or maintenance of WASH systems can have negative indirect impact on the environment as noted below. Additional facilities increase the financial and management burden on governments already experiencing fiscal meltdown. New facilities might affect the government's capacity to provide resources to operate and maintain both existing and new facilities.

Potential adverse impacts from water supply activities:

- Depletion of freshwater resources (surface and groundwater)
- Chemical degradation of the quality of potable water sources (surface and groundwater)
- Creation of stagnant (standing) water
- Degradation of terrestrial, aquatic, and coastal habitats
- Human health risks from a water source that becomes biologically or chemically contaminated.

Potential adverse impacts from sanitation activities:

- Increased human health risks from contamination of surface water, groundwater, soil, and food by excreta (including wastewater sludge), chemicals and pathogens
- Ecological harm from degradation of stream, lake, estuarine and marine water quality and degradation of land habitats.

Activity 6 - Food Security

6.1 Procurement and distribution of food commodities

6.2 Safe handling of food commodities

Provision of food can increase the amount of solid waste in the area of the food distributions. Also, inappropriately planned interventions can disrupt the local supply chain and lower the income of farmers and merchants typically supplying food to local households.

Inefficient supply chains and provision of food that is not can lead to food spoilage and increased waste if not properly managed. Providing food that is not palatable to the local communities may also result in waste.

Food distributions also in outbreak situations can be a carrier of pathogens or draw together large groups that facilitates transmission.

Depending on the mode of transportation, distribution can lead to increased GHG emissions, traffic, and noise pollution

Social impact regarding who has access to the food commodities and equitable distribution.

6.3 Fumigation of food commodities

Fumigation uses dangerous chemicals, of which the impacts may include:

- Negative health impacts to applicators and on-site workers and visitors (including transporters)
- Negative health impacts of residents near fumigation sites
- Negative impacts to water quality, soil and non-target organisms if fumigant disperses from the site
- Negative health impacts due to poor solid waste management (such as improper disposal of dead birds and rodents killed by fumigants) of fumigation residues/byproducts
- Need for ancillary treatment of fungal diseases as phosphine may not be effective in control of fungal contamination

Activity 7 - Small Scale Construction and Rehabilitation, such as construction, rehabilitation and expansion of: health facilities, screening posts, laboratories, temporary shelters, latrines, staging areas, and isolation units

7.1 Refurbishment/rehabilitation	Environmental impacts from small-scale construction and rehabilitation requiring mitigation include: • Generation of solid waste and potential for soil and
	 groundwater contamination, improper siting, site grading, drainage, and lack of erosion control can compromise waterways, water sources, and sensitive areas Potential for air pollution (both indoor and outdoor), noise pollution, traffic, congestion, odor, and visual quality impacts Socioeconomic impacts Occupational and public health and safety impacts include: exposure to asbestos, lead, VOCs, spills, construction accidents Resource depletion and indirect impacts from energy and water use Increased likelihood of virus transfer among the construction workers as social distancing cannot be applied.
7.2 Construction of latrines	Construction of water supply and sanitation infrastructure in or near sensitive areas like wetlands or estuaries can destroy flora,
7.3 Construction of boreholes or water systems	fauna, and/or their habitats, leading to losses in biodiversity and ecosystem functioning. It can also cause reductions in ecosystem services such as regulation of water flows and water quality, non-consumptive use (for generating power and transport/navigation, aesthetics, and recreational value). Soil erosion of exposed soils during construction can cause sedimentation into nearby water bodies, reducing the hydraulic capacity and water quality of surface water, and increasing risk of flooding and biodiversity loss.
7.4 Connecting to existing utilities (water, electricity)	In connecting to existing utilities, it is possible that the need for the construction/rehabilitation will be greater than that supplied by the system. In these cases, the utility may divert resources from the community or be cost prohibitive to continue to operate the facility after handover.
7.5 Backup power generation	Backup power generation is often through utilization of diesel generation. Diesel generators can be costly and also produce excessive air emissions if not properly sized.
7.6 Installation of temporary units (quarantine units, staging areas, offices, mobile supply warehouses, screening facilities)	The construction of temporary units have similar impacts to those of general construction noted above, but the above risks are heightened due to (1) the higher likelihood that infectious diseases that may be present in human excreta, (2) the vulnerability of patient populations to poor environmental health conditions, and (3) the particular hazards of health care waste. Failure to provide infrastructure for appropriate management of health care waste in newly constructed or renovated facilities, and failure to observe appropriate design standards for sanitation provision can have significant, adverse consequences.

Activity 8 - Small and medium enterprises (SMEs) in support of COVID-19 response

Training, capacity building, small grants, technical assistance and purchase of equipment of supplies for small and medium scale enterprises (SMEs).

Illustrative new SMEs responding to COVID-19 may include but not limited to:

- -PPE production
- -Sanitizer production
- -Delivery services
- -Technology development
- -Use of UAVs to deliver samples/products

SMEs can cause significant environmental and related public health difficulties, which vary as broadly as the types of enterprises. SMEs can be more pollution-intensive than larger enterprises (per unit of production). When they are numerous and/or concentrated in particular areas, they can create environmental problems of alarming proportions.

The adverse environmental impacts of SMEs can impose heavy social and economic burdens on their communities—degrading the ecosystem and food sources, undermining the health of neighbors and workers, and consuming fuel and resources beyond the point of renewability. These burdens in turn place significant costs upon not only the culpable SMEs but also other businesses—such as costs of procuring fuel, and costs of lost worker productivity due to sickness or injury.

Environmental Problems caused by SMEs include:

- Chemical and hazardous waste
- Air pollution and particulate dust
- Water pollution
- Soil erosion
- Natural resource depletion
- Solid waste
- Odor
- Noise
- Health and safety risks

Many decisions made by SMEs have the potential to harm the environment and public health. Specific examples include:

- Location decisions
- Purchasing decisions
- Processing/manufacturing decisions
- Housekeeping decisions
- Waste disposal decisions

Overall, adverse impacts are often caused by poor practices that go uncorrected because operators don't have the right technical information. Insufficient knowledge can lead to improper use of chemicals, inadequate treatment or disposal of solid and liquid waste, uncontrolled chemical air pollution, and production techniques that make intensive use of nonrenewable resources. Health and safety problems, in particular, are compounded by ignorance of industrial safety and environmental standards, as well as by lack of awareness of protective devices that are generally inexpensive and easy to obtain.

ANNEX 3. ILLUSTRATIVE MITIGATION MEASURES (FOR USE IN SIEES)

This table provides illustrative mitigation measures for a range of activities and sub-activities that may be included in COVID-19 responses. As appropriate, they should be integrated into SIEEs and their accompanying EMMPs. Available resources are provided for use as a supplementary reference where appropriate; however, contractual/agreement obligations and direction of the A/COR take precedence. It is highly encouraged that websites are revisited regularly as information if quickly evolving.

	Activity/Sub-Activity	Mitigation Measures
ı		

Activity 1 - Communications, outreach, analysis, planning

- a) Seek to be informed about ways to prevent COVID-19 transmission over the course of the activities, including where appropriate, training staff and beneficiaries on social distancing, PPE use, and disinfection (See Annex 5 and 6). Guidance can be found from local authorities or at CDC's Coronavirus Disease Site: https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html
 - WHO Getting your Workplace Ready for COVID-19: https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf?sfvrsn=359a81e7 6

 UNICEF, WHO, IRCF Key Messages and Actions for COVID-19 Prevention and Control in Schools https://www.who.int/docs/default-source/coronaviruse/key-messages-and-actions-for-covid-19-prevention-and-control-in-schools-march-2020.pdf?sfvrsn=baf81d52_4
- b) Where appropriate and available, the use of remote training and other non-face to face communications should be utilized when possible until the risk of infection pandemic passes.
- c) Follow local authorities regulations on the size of gatherings and travel advisories for COVID-19.
- d) Staff should be offered options for teleworking and/or to opt out of activities that they feel may put them at higher risk of infection, especially those that are particularly at risk (e.g., immunocompromised, those with respiratory infections, older adults) See CDCs' People who Need Extra Precautions: https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-at-higher-risk.html? https://www.cdc.gov%2Fspecific-groups%2Fpeople-at-higher-risk.html

Activity 2 — Laboratory or research strengthening

- 2.1 Support or provide technical assistance to develop processes, SOPs, and standards for specimen transport, laboratory diagnostics, and services
- a) Use of host country developed processes, SOPs and standards should be promoted; however, they must be assessed to evaluate whether they adequately address potential health and safety and environmental impacts of the operation of laboratory and diagnostic services and their wastes.
- b) When gaps exist, ensure the development and promotion of implementation of the SOPs/EHS manuals in accordance with best management practices.

Among the elements to consider in SOPs/EHS, are:

Storage- ambient conditions (e.g., temperature or humidity), security, stock inventory and records, fire control, and waste

management.

Safety- safe practices for laboratory workers such as proper use of PPE and training in infection control to reduce potential transmittal of disease from samples.

c) When adequate **waste management procedures** are not available, develop and implement a Waste Management Plan that addresses management of waste streams associated with laboratory operations. USAID provides guidance on WMPs at: https://www.usaid.gov/documents/1865/integrated-wastemanagement-plan-iwmp.

Refer to the following documents for guidance on COVID-19 when developing a laboratory EHS Manual:

WHO. Laboratory Biosafety Manual- Third Edition (2004)

WHO Coronavirus Technical Guidance.

https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/laboratory-guidance

Recommended components of the EHS Manual include:

- Chemical hygiene plan
- Safety Data Sheets (SDS) for chemicals used in the lab
- Use of appropriate personal protective equipment (PPE)
- Inspection and permit records
- Integrated Waste Management Plan, if applicable
- Spill prevention plan
- Injury and illness prevention plan
- Training requirements and records

Additional references:

- John Snow, Inc./USAID DELIVER Project in collaboration with WHO. Guidelines for the Storage of Essential Medicines and Other Health Commodities (2003).
- USAID DELIVER Project. *Guidelines for Warehousing Health*<u>Commodities</u> (Second Edition 2014).
- 2.2 Training, technical assistance, and capacity building of professional and paraprofessionals on laboratory establishment and/or operation, including training workers in methods for PPE use, diagnostics, and waste management

Training/curricula/supervision that creates waste as part of the training must address appropriate best management practices concerning the proper management of laboratory waste, sample handling and disposal, and PPE use. PPE must be provided to trainers, if dictated by the type of training.

Training on waste management and PPE use must be in accordance with the best standard of practice promoted by local authorities at the time of the training (or as developed in 2.1), but also

note any standards that would have more complex expectations outside of emergency operations (e.g., barrel incineration may be practiced at the time of an outbreak, but the IP should discuss national standards in the training typically required outside of emergency operation, such as double-chambered incineration).

See the USAID Sector Environmental Guidelines for Healthcare Waste (https://www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/sector-environmental-guidelines-resources#hw) for additional resources, particularly in the section titled, "Minimum elements of a complete waste management program."

See also WHO's "Safe Management of Wastes from Healthcare Activities."

WHO Coronavirus Technical Guidance. Laboratory Guidance: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/laboratory-guidance

2.3 Operation of a laboratory including all critical components such as procurement, storage, management, and disposal of laboratory commodities and samples, including, but not limited to diagnostic kits, laboratory supplies, reagents, and discarded PPE

General Operation. a) For each laboratory supported, assess the existing laboratory SOPs/EHS to evaluate whether they adequately address potential health and safety and environmental impacts of the operation of laboratory and diagnostic services and their wastes.

- b) If no SOP/EHS manual exists or gaps are identified, develop and implement a SOP/EHS manual in the laboratory in accordance with best management practices.
- c) The staff must be trained and provided guidance materials for activities related to the SOPs/EHS.
- d) Provide to the A/COR and/or develop and implement a laboratory SOP/EHS Manual.

Recommended components of the SOPs/EHS Manual include:

- Chemical hygiene plan
- Safety Data Sheets (SDS) for chemicals used in the lab
- Use of appropriate personal protective equipment (PPE)
- Inspection and permit records
- Integrated Waste Management Plan, if applicable
- Spill prevention plan
- Injury and illness prevention plan
- Training requirements and records

Refer to the following document for guidance when developing a laboratory EHS:

- EHS Manual: WHO. <u>Laboratory Biosafety Manual- Third</u> <u>Edition (2004)</u>
- WHO Coronavirus Technical Guidance.
 https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/laboratory-guidance
- CDC Laboratory Biosafety Manual.
 https://www.cdc.gov/coronavirus/2019-ncov/lab/lab-biosafety-quidelines.html

Waste Management. When adequate waste management procedures are not available upon review of the laboratory SOPs/EHS manuals, develop and implement a WMP that addresses management of waste streams associated with laboratory operations. USAID provides guidance on WMPs at:

https://www.usaid.gov/documents/1865/integrated-wastemanagement-plan-iwmp.

WMPs should address, as appropriate for the laboratory, the storage of wastes, containers and labeling, safe waste treatment and disposal practices and procedures, inspection protocols and frequency, and documentation requirements (e.g., waste manifests). Commodities which expire or are damaged are subject to all relevant requirements under the WMP. Refer to the following documents for guidance when developing a WMP:

- WHO. Safe Management of Wastes from Health-Care Activities (2014)
- WHO. <u>Preparation of National Health-Care Waste Management</u> <u>Plans in Sub-Saharan Countries</u> (2005)
- USAID. Integrated Waste Management Plan (WMP) (2019)
- USAID. <u>Sectoral Environmental Guidelines for Healthcare Waste</u>. (2019)
- USAID. Sectoral Environmental Guidelines for Solid Waste. (2018)
- GH Environmental Management Portal (portal access may be obtained through the COR) sections for additional guidance specific to GH activities, including:
 - Waste Management General Information
 - Healthcare Waste Management
 - Incineration

Sample or Supply Transport. When IPs are responsible for sample transport or supply transport, develop and implement SOPs for the safe transport of samples and supplies being transported in bulk in motorized vehicles. Distribution considerations include but are not limited to: transport needs and availability, fleet management and

monitoring, theft prevention procedures, accident and spill response, incident reporting, and vehicle maintenance.

Refer to the following documents for guidance when developing SOPs:

- USAID DELIVER Project. <u>The Logistics Handbook: A Practical</u>
 Guide for the Supply Chain Management of Health
 Commodities (2011)
- WHO Guidance for laboratories shipping specimens to WHO reference laboratories that provide confirmatory testing for COVID-19 virus https://apps.who.int/iris/bitstream/handle/10665/331639/WHO-2019-nCoV-laboratory_shipment-2020.3-eng.pdf
- CDC Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens from Persons for Coronavirus Disease 2019 https://www.cdc.gov/coronavirus/2019-ncov/lab/quidelines-clinical-specimens.html

Storage. Develop and implement SOPs for the safe and effective storage of commodities and samples to reduce damage and/or early expiration. Storage considerations include, but are not limited to: storage ambient conditions (e.g., temperature or humidity), security, stock inventory and records, fire control, and waste management.

PPE Provision. Where IPs are operating laboratories, they should support staff and facilities guidance and training for proper use and disposal of PPE appropriate to laboratory activities and waste handling as a result of those activities. When IPs are responsible for PPE provision, it should be provided in accordance with the best standard of practice achievable but strive to provide fully appropriate PPE as dictated by the services the laboratory is providing. Any substitutions or alternatives to PPE provision or use, made necessary by the emergency, should be documented in the regular reporting (e.g., utilizing scarves rather than respirators for respiratory protection). WHO currently recommends medical masks, gowns, gloves, and eye protection for workers handling laboratory samples: https://apps.who.int/iris/bitstream/handle/10665/331498/WHO-2019-nCoV-IPCPPE use-2020.2-eng.pdf

2.4 Contribution to research of vaccine and treatment protocol development

Where USAID is a minor donor to vaccine or treatment development, there are no associated mitigation measures.

For trials involving human subjects, the IP may have a completed and approved Institutional Review Board (IRB) review with an attached study protocol, by the appropriate agency(ies), and provided to the ME BEO PRIOR to initiation of trial with human subjects. The IRB review will be

incorporated as an IEE attachment post-signature.

Activity 3 - Support to formal and informal/temporary healthcare facilities and systems

3.1 Support or provide technical assistance to develop processes, SOPs, and standards for aspects of healthcare such as waste management, disinfection, specimen transport and storage, rapid diagnostics, and service delivery

See Conditions of Sub-activity 2.1 and Annex 5 and 6.

3.2 Training, technical assistance, and capacity building of health care workers, staff, community healthcare workers, and volunteers in areas of PPE use, waste management, procurement, storage, and disposal of commodities, and disinfection

Training/curricula/supervision that creates waste as part of the training must address appropriate best management practices concerning the proper management of healthcare waste, sample handling and disposal, and PPE use. PPE must be provided to trainers, if dictated by the type of training.

Training on waste management, storage of commodities, disinfection, and PPE use must be in accordance with the best standard of practice promoted by local authorities at the time of the training, but also note any standards that would have more complex expectations outside of emergency operations (e.g., barrel incineration may be practiced at the time of an outbreak, but the IP should discuss national standards in the training typically required outside of emergency operation, such as double-chambered incineration). PPE for healthcare workers depends on the setting, personnel and type of activity. See WHO Rational use of personal protective equipment (PPE) for coronavirus disease (COVID-19):

https://apps.who.int/iris/bitstream/handle/10665/331498/WHO-2019-nCoV-IPCPPE use-2020.2-eng.pdf

References include: USAID Sector Environmental Guidelines for Healthcare Waste (https://www.usaid.gov/environmental-procedures/sector-environmental-social-best-practices/sector-environmental-guidelines-resources#hw) for additional resources, particularly in the section titled, "Minimum elements of a complete waste management program

WHO's "Safe Management of Wastes from Healthcare Activities.
CDC Guideline for Disinfection and Sterilization of Healthcare
Facilities (2008). Updated May 2019.

https://www.cdc.gov/infectioncontrol/pdf/guidelines/disinfection-guidelines-H.pdf

CDC Strategies to Optimize the Supply of PPE and Equipment https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html

Considerations for Selecting Protective Clothing used in Healthcare for Protection against Microorganisms in Blood and Body Fluids https://www.cdc.gov/niosh/npptl/topics/protectiveclothing/

WHO Coronavirus disease (COVID-19) outbreak: rights,roles and responsibilities of health workers, including key considerations for occupational safety and health <a href="https://www.who.int/publications-detail/coronavirus-disease-(covid-19)-outbreak-rights-roles-and-responsibilities-of-health-workers-including-key-considerations-for-occupational-safety-and-health

3.3 Procurement or logistics support (distribution and transport) for healthcare commodities, diagnostic kits, PPE, and equipment for response to emerging threats

Procurement. a) Procure health commodities that comply with host country and international regulatory, shipping, and packaging requirements to ensure that only appropriate products enter the supply system. This includes products that are manufactured at facilities that meet good manufacturing practice (GMP) certification requirements, as recommended by the World Health Organization (WHO) or are pre-qualified by WHO.

- b) Develop and implement an inspection and quality assurance process for assessing and monitoring product quality. Considerations include, but are not limited to:
 - Selecting reliable and vetted suppliers;
 - Using existing quality assurance mechanisms established by WHO (see references below);
 - Establishing a system to report poor quality, expired, or defective products; and
 - o Performing regular pre- and post-shipment testing.
- c) Maintain copies of procurement records (e.g., manufacturing records, Certificate of Analysis, test data, regulatory certificates, etc.) and copies of quality documentation on file.
- d) Refer to the following documents for guidance on the procurement and quality assurance process:
 - WHO. <u>National Medicines List/Formulary/Standard Treatment</u> <u>Guidelines</u> (accessed September 30, 2016)
 - WHO. <u>Prequalification Programme: A United Nations Programme</u> <u>Managed by WHO</u> (accessed September, 2016)
 - USAID DELIVER Project. <u>Procurement Strategies for Health</u>
 <u>Commodities: An Examination of Options and Mechanisms within the</u>
 Commodity Security Context (2006)
 - WHO. <u>Operational Principles for Good Pharmaceutical Procurement</u> (1999)
 - WHO. <u>Certification Scheme on the Quality of Pharmaceutical</u> <u>Products Moving in International Commerce</u> (accessed September 30, 2016)

Storage. See Sub-activity 2.3.

Distribution Develop and implement SOPs for the safe distribution of health commodities being transported in bulk in motorized vehicles. Distribution considerations include, but are not limited to: transport needs and availability, fleet management and monitoring, theft prevention procedures, accident and spill response, incident reporting, and vehicle maintenance.

Refer to the following documents for guidance when developing SOPs:

- John Snow, Inc./USAID DELIVER Project in collaboration with WHO. <u>Guidelines for the Storage of Essential Medicines and</u> <u>Other Health Commodities</u> (2003).
- USAID DELIVER Project. <u>Guidelines for Warehousing Health</u> <u>Commodities</u> (Second Edition 2014). Task Order 4.
- WHO Guidance for laboratories shipping specimens to WHO reference laboratories that provide confirmatory testing for COVID-19 virus
 - https://apps.who.int/iris/bitstream/handle/10665/331639/WHO-2019-nCoV-laboratory_shipment-2020.3-eng.pdf
- CDC Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens from Persons for Coronavirus Disease
 2019 https://www.cdc.gov/coronavirus/2019-ncov/lab/guidelines-clinical-specimens.html
- 3.4 Assessment of waste management capacity for health entities to ensure proper disposal and limit vectors of disease via improperly managed healthcare waste;

The implementing partner must have access to technical expertise to (a) assess planned activities for potential impact on medical waste issues (generation, handling, disposal) and to develop, monitor, and report on implementation of management and waste management plans, and (b) ensure that training and technical assistance materials are accurate and reflect sound medical waste. Further references on waste management plans are provided in Sub-activity 2.3.

3.5 Procurement, distribution, and use of waste management equipment and systems

Sub-contracting for waste management services. In selecting contracted waste service providers, the IP must undertake reasonable efforts to ascertain that the providers are compliant with host country environmental, health, and safety requirements, and employ responsible practices for the disposal of waste resulting from the testing process.

For sub-contract of off-site recycling, treatment, and disposal.

Ensure sub-contractor providing recycling, treatment, or disposal service have SOPs established for properly transporting, treating, and disposing of healthcare waste offsite in conformance with host country requirements and international best practices. Considerations include but are not limited to: waste exportation protocols (if applicable), operational and monitoring requirements, and appropriate transport, treatment, and/or disposal documents and records.

Maintain contractor licenses and transportation documentation and records on file (e.g., consignment note or manifest form).

Procurement, distribution or use of waste systems directly by the IP.

If procuring, distribution or using waste management equipment of systems,

the IP must develop and implement a Waste Management Plan (WMP) (or comparable Standard Operating Procedures [SOP]) that provides procedures for managing wastes in conformance with international best practices and host country requirements. Management considerations include, but are not limited to: waste minimization procedures, proper handling of wastes (including personal protective equipment [PPE]), storage of wastes, containers and labeling, safe treatment and disposal practices and procedures, inspection protocols and frequency, and documentation requirements (e.g., waste manifests).

For waste produced by the IP supported activities, the wastes are subject to the relevant requirements under the WMP.

Refer to the following documents for guidance when developing a WMP:

- WHO. <u>Safe Management of Wastes from Health-Care Activities</u> (2014)
- WHO. <u>Preparation of National Health-Care Waste Management</u> Plans in Sub-Saharan Countries (2005)
- USAID. Integrated Waste Management Plan (WMP) (2019)
- USAID. <u>Sectoral Environmental Guidelines for Healthcare Waste</u>. (2019)
- USAID. Sectoral Environmental Guidelines for Solid Waste. (2018)

Note: If the implementer does not have adequate resources to properly handle healthcare waste on-site according to host country requirements and international best practices, contractor support or coordination with another USAID award may be acquired to ensure healthcare waste is properly managed.

Exportation of wastes. Exportation of waste across international boundaries has specific international and Agency requirements, which will be addressed on a case by case basis. The A/COR, MEO, and funding agency BEO must provide approvals of the process for managing the transportation and potential international shipment of hazardous waste for disposal. If the international disposal of hazardous waste is to be conducted by a third party, the Request for Proposal (RFP) for these 3rd party services for the international shipment must be approved by the A/COR with concurrence by the BEO. Solicitation of services for international exportation of hazardous material for disposal may not be initiated without approval of the RFP.

Exportation of wastes must be in accordance with the Basel Convention and export and receiving country regulations. Additional information can be found at

- Basel Export-Import Control Tool: Allows you to view information on the regulatory requirements, applicable treaties, available facilities, competent authorities, and other country-specific information pertaining to the transboundary movement of hazardous or other wastes.
- <u>Basel Convention Guidance Manuals</u>: List of resources for instructions and guidance for implementation of the Basel Convention

and environmentally sound management of covered wastes.

The following contains general references on waste management. The <u>GH Environmental Management Portal</u> (please request access through the COR) sections for additional guidance specific to GH activities, including:

- Waste Management General Information
- Healthcare Waste Management
- Incineration

Activity 4 - Support for use of disinfectants/germicides

- 4.1 Procurement, distribution, training, and use of **germicides** on surfaces
- -in community setting
- -in private homes
- 4.2 Procurement, distribution, training, and use of **ULV or fogging germicides**
- -in a community setting

See Annex 4.

Per USAID 22 CFR 216.3(b), pesticides must undergo further analysis. USEPA regulates germicides applied to objects and surfaces (but it does not regulate use of germicides in medical settings. Therefore use of disinfectants for non-medical purposes requires a 22 CFR 216.3(b)(1)(i)a-l analysis be completed for the selected germicides. Local authorities, host country health ministries, and international and US authorities should be consulted for a list of effective products for the particular pathogen of concern. The following resources are available, but may be updated or changed with the evolving context:

- CDC and USEPA recommended germicides for cleaning surfaces: https://www.cdc.gov/coronavirus/2019-ncov/prepare/prevention.html
- https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2
- 4.3 Procurement, distribution, training, and use of **germicides**-on surfaces in a medical facility setting
- 4.4 Procurement, distribution, training, and use of **ULV or fogging germicide**
- in a health facility setting

- a) Conditions of good procurement and distribution as noted in Sub-activity 3.3 apply.
- b) For all manufactured and homemade products when selecting a disinfectant/germicide for a particular use, the user should be informed and take into consideration the human and environmental hazardous properties of the chemical and know how to use it properly. Safety Data Sheet (SDS) for all materials used and use instructions should be read and understood by all individuals, who will use the chemicals.
 - In the absence of local guidance, the IP must develop SOP/EHS
 manuals for the use of germicides or identify applicable SOP
 resources for disinfection.. See Sub-activity 3.1 for expectations of
 SOP/EHS contents. The appropriate references should be identified
 at the time of the outbreak. Two possible resources are:
 - <u>Guideline for Disinfection and Sterilization in Healthcare Facilities</u>, 2008 Update: May 2019
 - FDA-Cleared Sterilants and High-Level Disinfectants with General Claims for Processing Reusable Medical and Dental Devices
 - General guidance is also provided in Annex 5 and 6
 - Where the IP is supporting use of training of germicides, the implicated staff must be provided training on appropriate use of the disinfectant/germicide, PPE use, health and environmental risks of germicidal use, and appropriate waste treatment methods.

 Appropriate PPE must be provided to trainees or staff supported by the IP for use and training.

Activity 5 – WASH (see Category #7 for construction of latrines)

5.1 Distribute WASH supplies to households and preposition disinfection equipment and related items

With the distribution of WASH supplies, there must be associated training and capacity building on proper use, particularly of any disinfection materials, and management of solid waste. Activities must also adhere to host country guidelines for rural sanitation and latrines constructions.

See reference USAID Sector Environmental Guidelines for Water and Sanitation: https://www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/seg-water-supply/pdf CDC How to Protect Yourself: https://www.cdc.gov/coronavirus/2019-ncov/prepare/prevention.html

5.2 Supply drinking water via installation of household point of use treatment systems

Good-practice design standards must be implemented for new construction and rehabilitation works, in accordance with host country design codes and standards where applicable, and generally consistent with USAID's Sector Environmental Guidelines: Water Supply & Sanitation: https://www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/seg-water-supply/pdf.

Additional guidance for WASH in the context of COVID-19 is found at: WHO Water, Sanitation, Hygiene and Waste Management for COVID-19: https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19

5.3 **Technical assistance** for the design and implementation of supplemental water and sanitation facilities

Technical assistance to design water and sanitation facilities should also include provision of the following:

- Clean and disinfect water systems following construction or maintenance activities using chemical disinfectants (e.g. chlorine).
- Monitor disinfectant residual levels in water source and ensure that levels are in compliance with WHO guidelines.
- Implement a water surveillance program to monitor the quality of the
 water supply system throughout operation. Document water testing
 requirements, including responsible parties, frequency of testing, and
 protocols in the Water Quality Assurance Plan (WQAP). Frequency of
 testing may vary based on population served, reliability of the quality of
 the drinking-water, degree of treatment, presence of local risk factors,
 and local or host country requirements.
- Provide outreach, educational materials, and training to users/community on the proper use, operation, and maintenance of the water supply system to ensure the long-term sustainability of the system.
- Prior to initiating any design ensure that the host government has the financial and management capacity to manage and operate additional facilities without adversely impacting existing ones.

Additional references are provided at: WHO Water, Sanitation, Hygiene and

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	Waste Management for COVID-19:				
	https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-				
	management-for-covid-19				
Activity 6 – Food Security	Activity 6 – Food Security				
6.1 Procurement and distribution of food commodities	CDC currently notes that potential for contracting COVID-19 from food is low: https://www.cdc.gov/foodsafety/newsletter/food-safety-and-Coronavirus.html				
6.2 Safe handling of food commodities	FDA regularly updates food safety issues with COVID-19, but currently are not issuing new guidance for those handling food who are not ill. Find current updates at: https://www.fda.gov/food/food-safety-during-emergencies/food-safety-and-coronavirus-disease-2019-covid-19				
	However, during the distribution of food aid, groups may congregate. Procurement and food distributions and handling must be appropriate to the situation and must consider social distancing and safe practices to prevent the spread of disease. See CDCs Disease Prevention Site: https://www.cdc.gov%2Fprepare%2Fprevention.html				
6.3 Fumigation of food commodities	Fumigation is subject to the Fumigation PEA. https://www.usaid.gov/documents/1860/pea-t-3-template-fumigation-management-plan				
	As such, the Fumigation PEA requires the IP to develop and implement a Fumigation Management Plan (FMP) that describes the steps that will be taken before, during, and after the fumigation process to ensure that fumigants are applied safely and effectively. The FMP documents pertinent information such as: responsible parties (e.g., storage facility manager, fumigators); emergency contact information; personal protective equipment and staffing notification and emergency response plans; commodities being fumigated, dosage and downtime calculations; gas concentration monitoring logs; and any accidents or exceptions to the procedures. If using a fumigation contractor (third party), the contractor is responsible for storing fumigants according to label directions, host country requirements, and international best practices.				
	Refer to the following documents for guidance when developing an FMP:				
	 USAID. Phosphine Fumigation Management Plan (FMP) (Sheeted Stacks Only) (August 2014 USAID. Phosphine Fumigation of Stored Agricultural Commodity: Programmatic Environmental Assessment (November 2013) USAID. Phosphine Fumigation of Stored Agricultural Commodity: Programmatic Environmental Assessment Tool Annex (November 				

2013)

Ensure that fumigation is performed by trained and licensed applicators and that they have the ability to comply with the FMP.

Contractual language with the service provider will include requirements to comply with host country laws governing pesticide use and with the FMP.

Activity 7 - Small Scale Construction and Rehabilitation

To qualify as a small-scale activity, the construction/rehabilitation must meet ALL the following criteria, which would be considered complicating factors:

- (a) disturbs an area less than 1000 m²;
- (b) has a total facility cost less than \$500,000;
- (c) will not involve resettlement; AND
- (d) is not in or adjacent to an undisturbed local ecosystem.

7.1 Construction/Refurbishment/ Rehabilitation

All construction activities must comply with the requirements ADS 303maw and 201maw. A proper site investigation must be accomplished by qualified professionals to adequately evaluate site conditions based on the size and complexity of the construction activity. The implementing partner must develop a design plan that includes the use of appropriate building materials and complies with international best management practices and host country laws and regulations. The implementing partner will develop a waste management plan that includes procedures for properly disposing of nonhazardous and hazardous materials and recover reusable materials to reduce the disposal of construction debris by recycling where possible. The implementing partner must develop and enforce a Health and Safety Plan to minimize the risk of spreading virus among construction workers.

USAID developed a set of resources that analyze potential environmental impacts associated with activities common to USAID, including indirect impacts from technical assistance. For additional analyses of environmental impacts in construction, healthcare facilities, healthcare waste, solid waste management, and housing, among others, refer to USAID Sectoral Environmental Guidelines and Resources

(https://www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/seg-construction/pdf)

7.2 Construction of latrines

7.3 Construction of boreholes or water systems

Good-practice design standards must be implemented for new construction and rehabilitation works, generally consistent with USAID's Sector Environmental Guidelines: Water Supply & Sanitation: https://www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/seg-water-supply/pdf.

The COVID-19 virus has not been detected in drinking-water supplies or via sewerage systems with or without wastewater treatment. Based on current evidence, the risk to water supplies and sanitation systems is low. is low;

however, additional references are provided by WHO that should be considered for WASH activities. See WHO Water, Sanitation, Hygiene and Waste Management for COVID-19: https://www.who.int/publications-detail/water-sanitation-hygiene-and-wastemanagement-for-covid-19 These standards must be specified in the EMMP. For water supply, these activities must include siting of new wells away from groundwater contamination sources (e.g. latrines, cesspits, dumps) (generally at least 15-30m), exclusion of livestock from water points, and prevention of standing water at water supply points. For **latrines**, they must include provisions to prevent contamination of water supplies, appropriate choice of latrine type given local environmental conditions (e.g. pit latrines are rarely suitable in locations where the water table is high), provision of hand wash stations, and development and implementation of a system for ongoing latrine cleaning and maintenance Capacity-building in equipment/system maintenance must be coprogrammed with construction/installation of small-scale water supply and sanitation infrastructure. Ensure that the host government has the financial and human resources capabilities required to operate the new facilities according to design parameters. Develop and enforce a Health and Safety Plan to minimize the risk of spreading virus among construction workers. Water quality assurance plan. More specifically, the Mission shall ensure that the implementing partner develops and implements a Water Quality Assurance Plan that addresses how the partner will ensure the provision of safe drinking water to communities served under the subject activity. This Plan should be approved by the MEO and should assure that drinking water sources meet local and WHO water quality standards. 7.4 Connecting to existing Utility connections that are the responsibility of the IP will receive the utilities (water, electricity) approval of the local authorities. IPs will verify that the connection does not burden the community with reduction in services (e.g., aquifer drawdown is not expected). An IP that is providing backup power generation will consider 7.5 Backup power generation green energy provision as an option for generation if the situation allows (e.g., solar may make sense to install on an existing facility used for an outbreak but may not be reasonable for temporary shelters). 7.6 Installation of temporary Conduct a site survey to adequately evaluate site conditions based on the size and complexity of the activity. The IP will verify that the site selected for units (quarantine units, staging areas, offices, mobile supply the installation is not prone to flooding, landslides, or considered sensitive warehouses, screening habitat. The implementing partner must develop a design plan that includes the use of appropriate building materials and complies with international facilities)

best management practices and host country laws and regulations. The implementing partner will develop a waste management plan that includes procedures for properly disposing of nonhazardous and hazardous materials and recover reusable materials to reduce the disposal of construction debris by recycling.

USAID developed a set of resources that analyze potential environmental impacts associated with activities common to USAID, including indirect impacts from technical assistance. For additional analyses of environmental impacts in construction, healthcare facilities, healthcare waste, solid waste management, and housing, among others, refer to USAID Sectoral Environmental Guidelines and Resources

(https://www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/seg-construction/pdf).

Activity 8 Small and medium enterprises (SMEs) in support of COVID-19 response

8.1 Training, capacity building, small grants, technical assistance, purchase of equipment or supplies, or financing for small and medium scale enterprises (SMEs).

Illustrative new SMEs responding to COVID-19 may include but not limited to:

- -PPE production
- -Sanitizer production
- -Delivery services
- -Technology development
- -Use of UAVs to deliver samples/products

- Activities shall be conducted following principles of USAID small scale guidelines chapters: https://www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/sector-environmental-guidelines-resources#ms
- b) For support to banks, financial institutions, or small grants, activities will be screened to categorize the SME's work to the types and significance of environmental impacts they generate.
- c) Assistance for SME must comply with local, national, USAID, or its own organizational environmental policies. Yet, it is unreasonable to expect for IPs to conduct a detailed assessment of the impacts of every SME they work with. The goal of the screening phase is to determine quickly and easily assess if an assistance request from an SME (for a loan, business planning, accounting training, etc.) will need environmental review before it can be approved.
- d) With activities involving hazardous materials, the implementing partner must work with the business to develop a written plan to ensure appropriate procurement, storage, management and/or disposal of these materials.

ANNEX 4. APPROVED DISINFECTANTS AND 22 CFR 216.3(B)(1)A-L ANALYSIS

For the purpose of this document, uses of disinfectants (germicides) are divided into non-medical and medical uses. Some non-medical-use germicides utilized for cleaning inanimate objects and surfaces (environmental surfaces) are classified by the US Environmental Protection Agency (USEPA) as pesticides. This definitional distinction does not suggest that non-medical disinfectants are more toxic than medical use disinfectants. For purposes of USAID environmental review, however, this USEPA definition triggers the Pesticide Procedures analysis found at 22 CFR 216.3(B)(1)A-L.

Categorizations of Disinfectants/Germicides

USAID programs seeking to provide guidance to businesses, institutions and individuals in the procurement and use of disinfectants and sterilants on environmental surfaces (i.e., are not providing guidance on their use for medical purposes) should comply with conditions for non-medical Use of Disinfectants (see Part a) and seek guidance primarily from local authorities. USAID programs seeking to provide guidance for use of pesticides to medical facilities should comply with conditions for Medical Use of Disinfectants (see Part b).

a) Conditions for Non-Medical Use of Disinfectants/Germicides

For activities described below, use of disinfectants/germicides constitutes use of pesticides:

- Procurement and distribution of disinfectant/germicides by partners to all facilities, community health workers, businesses, public institutions, and households for cleaning and disinfection.
- ULV fogging and community-wide surface cleaning in non-medical facilities.
- Training and demonstration of disinfectant/germicide preparation and use as well as solid and liquid waste management.

This is because disinfectant/germicide use on non-medical surfaces is considered use of a pesticide and regulated by USEPA and therefore under 22 CFR 216.3(b)(1)(i) requires USAID Pesticide Procedures' "12-factor analysis."

As such, for these activities the following SIEE conditions will apply:

- Use only the following Als as a sole ingredient and/or in combination of ingredients, that are registered and approved by USEPA and per the EE COVID-19 PIEE for use of cleaning and disinfecting surfaces:
 - Alcohols: Ethanol, Isopropanol, Triethylene Glycol
 - Salts: Ammonium Carbonate, Ammonium Bicarbonate, Sodium Carbonate, Sodium Chlorite, Sodium Dichloro-S-Triazinetrione, Sodium Dischloroisocyanurate Dihydrate, Sodium Hypochlorite
 - Acids: Citric, Hypochlorous, Glycolic, L-Lactic, Octanoic, Peracetic, Peroxyacetic, Peroxyoctanoic, Phenolics
 - Peroxides: Hydrogen Peroxide. Peroxyhydrate
 - Quaternary Ammonium compounds

- Other ingredients: Silver ions, botanical oil thymol
- Select products that contain active ingredients or mixture of active ingredients that are approved by this EE COVID-19 PIEE listed above. For selecting which concentrations are effective, it is best to consult the <u>USEPA-approved list of products</u> and identify same or similar products.
- The partner must complete the disinfectant checklist for their planned interventions using disinfectants and retain the document with their EMMP.
- The A/COR and MEO must review and clear on the disinfectant checklist.
- Consult local authorities and follow host country established channels of communication when providing recommendations for use of disinfectants/germicides.

b) Conditions for Medical Use of Disinfectants/Germicides

For activities described below, use of disinfectants/germicides constitutes use of pesticides:

• Use of antiseptics/disinfectants/sterilant germicides on human body and medical devices and in medical facilities on medical equipment.

Best Management Practices, Health and Safety and Environmental Mitigation Measures specified by lead health organizations, such as CDC, should be applied to these uses and detailed in the EMMP. Recently developed references for COVID-19 in healthcare settings can be found at:

- CDC's Information for HealthCare Professionals
- CDC's Information for Laboratories
- CDC's <u>Rationale and Considerations for Chlorine Use in Infection Control</u> for Non- U.S. General Healthcare Settings

Mandatory 22 CFR 216.3(b)(1) - 12-Factor Analysis for Pesticides

The following 12-factor analysis mandated by 22 CFR 216.3(b)(1) is intended to assist and serve as a basis for SIEE development for implementing partners engaged in activities requiring use of germicides that fall under definition of pesticides as described above. Modifications and additions of relevant information can be made as appropriate.

A. U.S. Environmental Protection Agency (US USEPA) registration status of the proposed pesticides

Active ingredients (Als) and combinations of Als listed above are registered by USEPA.

B. Basis for selection of pesticides

These pesticides were recommended by USEPA as effective for treatment of environmental surfaces and are based on full product list provided by USEPA at:

https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2

C. Extent to which the proposed pesticide use is part of an IPM program

These Als are recommended in combination with handwashing measures and recommendations to avoid touching face, eyes and mouth with unwashed hands. The following site provides links to both CDC recommended hand cleaning procedures: https://www.cdc.gov/coronavirus/2019-ncov/prepare/prevention.html

D. Proposed method or methods of application, including the availability of application and safety equipment

Methods of application of products are in accordance with the label and manufacturer instructions. For home made products follow strictly dosage instructions provided by relevant authorities.

E. Any acute and long-term toxicological issues with the proposed use, and measures available to minimize such hazards

All chemical disinfectants are, by their very nature, potentially harmful or toxic to living organisms. Like other toxic substances, the chemical disinfectants can enter the body through several routes, including absorption through skin or mucous membrane, inhalation and ingestion. Sometimes a chemical substance can enter through more than one of the routes. However, chemical disinfectants would be effective and safe tools when handled properly with the safety measures in place. If misused, they can be hazardous and harmful to people and the environment.[1]

Accidental exposure in high doses may result in acute toxic reaction such as skin irritation, dizziness or nausea, or they may be permanent: blindness, scars from acid burns, mental impairment and other adverse health effects. Acute toxicity is often seen within minutes or hours after a sudden, high exposure to a chemical. However, there are a few instances where a one-time high-level exposure causes delayed effects. Symptoms of exposures may not appear for several days.

As a general rule, chronic toxicity appears many years after exposure first began. The health effects may occur where exposure has taken place repeatedly over many years. For this activity, repeated exposure over the long term is not anticipated.

Disinfectants can pose physical/chemical risks and can be flammable or explosive. Products must be stored at temperatures designated by their labels/Safety Data Sheets.

All Als and products should be accompanied by the label and, where available, a Safety Data Sheet. First aid instructions must be available to users and health workers.

All disinfecting products/Als and their containers must be properly triple rinsed away from all water sources, punctured and properly recycled or disposed of, never reused.

F. Effectiveness of the requested pesticide for the proposed use

The AI approved by this IEE are contained in USEPA approved/recommended products for disinfection of environmental surfaces against COVID-19.

G. Compatibility of the proposed pesticide use with target and non-target ecosystems

Disinfectants contribute to air and water pollution during their manufacture and use. Cleaning, sanitizing and disinfecting products can increase indoor air pollution. However, Als identified by USEPA as effective against COVID-19 are recommended by this IEE.

H. Conditions under which the pesticide is to be used, including climate, geography, hydrology, and soils

Als in products recommended will be used mostly indoors and surfaces around structures. These Als/products should be used away from ambient environmental water sources and in a manner that prevents runoff.

I. Availability of other pesticides or non-chemical control methods

Only Als/Products registered by USEPA are recommended. Other Als, such as aldehydes that are approved by EU for disinfection, are not covered by this IEE.

J. Host country's ability to regulate or control the distribution, storage, use, and disposal of the requested pesticide

Most host countries in E&E have limited frameworks for regulation of pesticides and most do not satisfactorily regulate disinfectants for use on environmental surfaces. Regulation of disinfectants is a joint effort between Ministries of Health (MoH) and Ministries of Environment (MoE). Most countries in E&E have a network of health clinics and environmental quality directorates that can be instrumental for Training of Trainers (TOT) and promulgation of guidelines for use of disinfectants.

K. Provision for training of users and applicator

Guidelines, training materials and awareness built through Social Behavior Change Communication (SBCC) messaging should be developed for each country, translated to local languages, and distributed through MoH networks. These should also include a list of Als, labels, SDSs, and instructions for first aid and environmental controls.

L. Provision made for monitoring the use and effectiveness of each pesticide

Use and effectiveness will be tracked through regular reporting by the partners supporting the actions involving germicides. Overall, monitoring effectiveness in limiting spread of COVID-19 will depend on numerous factors that are likely to be monitored as part of disease surveillance by host countries' Ministries of Health and their international donors.

[1] https://www.labour.gov.hk/eng/public/os/C/Disinfectants.pdf

ANNEX 5 PRACTICAL GUIDANCE FOR USE OF DISINFECTANTS

This annex provides resources for the safe use of disinfectants, including specific practices related to COVID-19. Since information and best practices are still evolving, users should frequently visit websites for updates and maintain contact with their local health authorities.

Disinfection Procedures

Disinfection at a household with a suspect or confirmed case of COVID-19:

A complete guide to disinfecting households with suspected or confirmed COVID-19 cases is available at: https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cleaning-disinfection.html

When using manufactured product for disinfection of inanimate objects:

- a) Select products that contain active ingredients or mixture of active ingredients that are approved by this IEE. For selecting which concentrations are effective, it is best to consult the USEPA-approved list of products and identify the same or similar products. A full list of products approved is available at: https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2
- b) Always ensure that the product has a proper label. Labels of disinfectants should include the following information:
 - Product name
 - Company name and address
 - Net contents
 - Manufacturing/host country registration detail
 - Active ingredients statement
 - Child hazard warning
 - Hazard signal word
 - First aid instructions
 - Precautionary statements and requirements for use of PPE
 - Environmental hazards statements
 - Physical/chemical hazards statements
 - Directions for use and misuse statement
 - Storage and disposal instructions
- c) Always use products in accordance with the label. Strict attention must be given to the proper use of a product with regard to its application, effectiveness, and associated hazards (human, animal, and environment). Where possible, obtain the Safety Data Sheet that provides more extensive product detail.

Directions for use must specify:

- The surfaces, objects or inanimate environments intended for treatment (floors, walls, bathroom surfaces, etc.)
- The major areas in which the product is intended for use (hospitals, restaurants, homes, schools).
- The level of activity (e.g., Sanitizer, Disinfectant, Sporicide)

- · Pathogens against which product is effective
- How the product must be applied
- Pre--cleaning steps
- Recommended use dilution and provide instructions for preparing it including the units of measure (milliliters, liters, ounces, quarts).
- Method of application
- Contact time
- · How to remove the product from the surface after the recommended exposure time[1]

When using homemade products for disinfection of inanimate objects:

Natural household disinfectants may be less effective than commercial household disinfectants. It is important to be informed on hazards of AI(s) used for homemade product preparations. Where possible, SDS sheets should be obtained for AI(s) used in preparing homemade products. The SDS information and risk assessment will help determine, the PPE requirements, describe health hazards of unprotected exposure to people and animals, describe physical hazards such as flammability and explosion, and environmental hazards such as toxicity to aquatic organisms, provide hazard statements and first aid instructions and instructions for use, storage and disposal of chemical used in making of a disinfectant.

COVID-19 Categories of Disinfectants – Considerations for Safe Use

Bleach

Homemade disinfectants are most commonly made from household bleach. Chlorine containing bleach is a common household disinfectant in the Middle East.

Household bleach is usually a mixture of chemicals, its main active ingredient is a solution of ~3-6% sodium hypochlorite (NaOCI), which is mixed with small amounts of sodium hydroxide, hydrogen peroxide, and calcium hypochlorite. Unexpired household bleach will be effective against coronaviruses when properly diluted.

Bleach solution preparation recommended by CDC^[1]:

Diluted household bleach solutions can be used if appropriate for the surface.

- Prepare a bleach solution by mixing:
 - o 5 tablespoons (1/3rd cup) bleach per gallon of water or
 - o 4 teaspoons bleach per quart of water
- Follow manufacturer's instructions for application and proper ventilation.
- Check to ensure the product is not past its expiration date.
- Never mix household bleach with ammonia or any other cleanser.

Excessive use of bleach indoors, especially when mixed with some other cleaning agents, can release harmful chlorine gas. Inhalation and long term exposure can cause lung damage and respiratory illnesses.

Chlorine compounds found in bleach are unstable and react with a variety of chemicals and water when it is released into the environment. Because chlorine is so reactive, it is not normally detected in the environment except for very low levels. Bleach spilled into surface water may adversely affect aquatic organisms. Inhaling bleach fumes may cause eye, nose, throat irritation depending on dosage. The effects will depend also on exposure duration. In general,

people who suffer from respiratory conditions such as allergies or hay fever, or who are heavy smokers, tend to experience more severe effects than healthy subjects or nonsmokers. Spilling hypochlorite solution on the skin can produce irritation. The severity of the effects depends on the concentration of sodium hypochlorite in the bleach. Drinking small amounts of hypochlorite solution (less than a cup) can produce irritation of the esophagus. Drinking concentrated hypochlorite solution can produce severe damage to the upper digestive tract and even death. These effects are most likely caused by the caustic nature of the hypochlorite solution and not from exposure to molecular chlorine. Long-term exposure to small amounts of sodium hypochlorite has not shown to have significant impacts on human health. [2]

Alcohols

Alcohols that are components of drinking beverages and rubbing alcohols are recommended for sanitizing, not for drinking. Alcohol products must be at least 70%. Most drinking beverages are below 48% alcohol and not appropriate for sanitizing.

Rubbing alcohol products that are at least 70 percent alcohol reportedly will kill viruses. When using rubbing alcohol, do not dilute it below 70%. Alcohol higher than 70% is not always better, and 70% alcohol is better than 91% because water plays a key role in protein denaturation. Consumer Reports says rubbing alcohol is safe for all surfaces but can discolor some plastics.

Although it has the word alcohol in its name, rubbing alcohol is completely different from the ethyl alcohol found in alcoholic beverages. Isopropyl alcohol, also referred to as isopropanol and IPA, is twice as toxic as ethanol. Swallowing just 8 ounces, or 240 milliliters, of rubbing alcohol can be fatal — but as little as 20 milliliters mixed with water can make a person sick.

Inhaling rubbing alcohol can also cause serious side effects, including headache, nausea, vomiting and irritation of the nasal passages and lungs. Inhaling isopropanol fumes can cause a loss of consciousness.^[4]

Hydrogen Peroxide

Hydrogen peroxide is typically sold in concentrations of about 3%. Hydrogen peroxide at this concentration should be able to neutralize the coronavirus. It is recommended to be left on surfaces for at least 1 minute. Hydrogen peroxide is not corrosive and can be used on metal surfaces. Similar to bleach, it can discolor fabrics. Hydrogen peroxide had minimal impact on the environment as it decomposes into oxygen and water.

Acids

Commercial products effective against Covid-19 often contain acids. Acids range from weak to very strong. Weak acids such as household vinegar are not likely to be effective against coronavirus (NOTE: Household vinegar (5% acetic acid) combined with hydrogen peroxide creates peroxyacetic acid. It's an EPA approved, environmentally friendly, disinfectant for coronavirus).

Concentrated industrial strength acids are not recommended as they can be extremely corrosive and can cause dangerous burns when not handled properly. Only acids approved by this IEE can be used in preparation of homemade products.^[5]

Quaternary ammonium compounds

The quaternary ammonium compounds (QAC) are widely used as surface disinfectants and are an active ingredient in household cleaning products. Health hazards of QACs include contact dermatitis, triggering of asthma symptoms in people who already have asthma or new onset of asthma in people with no prior asthma, eye and mucous membrane injuries from splashes or contact with mists, and oral and gastrointestinal injuries from swallowing solutions containing QACs. [6] Some household products can be diluted with water but the correct dosage effective against Covid-19 must be established. [7]

Oils

Botanical oil thymol in an ingredient in some USEPA approved products effective against COVID-19. There is no evidence that other oils such as tea tree oil are effective.

- [1] https://www.cdc.gov/vhf/ebola/clinicians/non-us-healthcare-settings/chlorine-use.html
- [2] https://emergency.cdc.gov/agent/chlorine/basics/facts.asp
- [3] https://www.lenntech.com/periodic/elements/cl.htm#ixzz6IPDRT1xR
- [4] https://www.drugrehab.com/addiction/alcohol/drinking-rubbing-alcohol/
- [5] https://aces.nmsu.edu/pubs/_g/G304/welcome.html
- [6] https://med.nyu.edu/pophealth/sites/default/files/pophealth/QACs%20Info%20For%20Physicians_18.pdf
 [7] https://www.thejakartapost.com/life/2020/03/24/want-to-disinfect-your-home-lipi-recommends-cleaning-products-as-alternativedisinfectants.html

ANNEX 6. COVID-19 PREVENTION: ENHANCED CLEANING AND DISINFECTION PROTOCOLS

In alignment with public health recommendations, the following enhanced cleaning and disinfection protocols are recommended for helping to prevent community spread of COVID-19:

1. ENHANCED CLEANING FOR PREVENTION

General guidance:

- a. Increase the frequency of cleaning and disinfecting, **focusing on high-touch surfaces**, such as residence hall communal rooms, public restrooms, exercise rooms, library tables, buttons, handrails, tables, faucets, doorknobs, and shared keyboards. Increased frequency of cleaning and disinfecting with attention to these areas helps remove bacteria and viruses, including the novel coronavirus.
- b. Practice good hand hygiene after cleaning (and always!):
 - i. Wash hands often with soap and warm water for at least 20 seconds.
 - ii. If soap and warm water are not readily available, use an alcohol-based hand sanitizer that contains at least 60% alcohol.

Safety guidelines during cleaning and disinfection:

- a. Wear disposable gloves when cleaning and disinfecting. Gloves should be discarded after each use. Clean hands immediately after gloves are removed.
- b. Wear eye protection when there is a potential for splash or splatter to the face.
- c. Gowns or aprons are recommended to protect personal clothing.
- d. Store chemicals in labeled, closed containers. Keep them in a secure area away from children and food. Store them in a manner that prevents tipping or spilling.

Cleaning and disinfection of surfaces:

- Clean surfaces and objects that are visibly soiled first. If surfaces are dirty to sight or touch, they should be cleaned using a detergent or soap and water prior to disinfection.
- b. Clean and disinfect affected surfaces as soon as possible after a known exposure to person with respiratory symptoms (such as coughing/sneezing).
- c. Use an EPA-registered disinfectant for use against COVID-19. Refer to the list of <u>products pre-approved</u> for use against emerging enveloped viral pathogens, or the list of <u>disinfectants</u> for use against SARS-CoV-2.
- d. Follow the manufacturer's instructions for safe and effective use of all cleaning and disinfection products (e.g., dilution concentration, application method and contact time, required ventilation, and use of personal protective equipment)..

- e. Consult manufacturer recommendations on cleaning products appropriate for electronics. If no guidance is available, consider the use of alcohol-based wipes or spray containing at least 70% alcohol. Use of alcohol-based products may reduce risk of damage to sensitive machine components. Whenever possible, consider using wipeable covers for electronics.
- f. The following products are effective for disinfection of hard, non-porous surfaces:
 - i. A 10% diluted bleach solution, an alcohol solution with at least 70% alcohol, and/or an EPA-registered disinfectant for use against COVID-19.
 - ii. Prepare a 10% diluted bleach solution by doing the following:
 - · Mix five tablespoons of bleach per gallon of water.
 - After application, allow 2 minutes of contact time before wiping, or allow to air dry (without wiping).
- g. For soft (porous) surfaces such as carpeted floor, rugs, and drapes:
 - i. Remove visible contamination (if present) and clean with appropriate cleaners indicated for use on these surfaces.
 - ii. After cleaning, launder items (as appropriate) in accordance with the manufacturer's instructions. If possible, launder items using the warmest appropriate water setting for the items and dry items completely.
 - iii. If laundering is not possible, use an EPA-registered disinfectant for use against COVID-19. Refer to the list of <u>products pre-approved</u> for use against emerging enveloped viral pathogens, or the list of <u>disinfectants</u> for use against SARS-CoV-2.

ANNEX 7 CLIMATE RISK MANAGEMENT

The purpose of Climate Risk Management (CRM) screening at USAID is to assess, address, and adaptively manage, "climate risks that may impact the ability of USAID programs to achieve objectives."

In the spirit of CRM and good development practices, COVID-19 related funding should balance the direct response to this crisis, while also building longer term climate resilience, when possible.

Climate Risk Management (CRM) aims to assess, address, and adaptively manage climate risks that may impact the ability of USAID programs to achieve objectives. Reducing climate risks to project or activity implementation can improve development outcomes. Agency requirements for CRM for projects and activities are described in Climate Risk Management for USAID Projects and Activities Mandatory Reference for ADS Chapter 201.

While a full Climate Risk Management screening was not completed for this COVID-19 PIEE, a preliminary CRM screening table is provided below to assist Missions in completing the CRM screening as part of the SIEE.

Climate and COVID-19

Climate and weather shocks and stressors can cause direct and indirect negative impacts to human health, such as heat waves leading to increased heat related illness, or changing temperatures and rainfall patterns changing the distribution of infectious diseases. These impacts may magnify the severity of COVID-19. Furthermore, climate and weather shocks and stressors may also weaken health systems, and these systems' ability to respond to COVID-19. The most vulnerable populations are usually the most impacted by climate and weather shocks and stressors, potentially putting more people at risk of serious illness due to COVID-19.

As part of any COVID-19 response in the E&E region involving establishment of temporary facilities, siting characteristics of such facilities will be considered to avoid areas prone to flooding, landslides, etc.

Is CRM screening required for my activity/project receiving COVID-19 related funding?

- 1. Activities and projects that receive COVID-19 related funding are required to undergo a CRM screening *unless* they have already undergone a CRM screening.
- 2. New projects and activities designed with COVID-19 related funding are required to undergo a CRM screening.
- 3. For those that already have been screened, an Operating Unit may choose to revise the original CRM screening, but it is not required.

Next steps

To assist Missions in conducting CRM screenings for activities and projects receiving COVID-19 related funding that do not fall under the exception above, an initial CRM screening table is provided <u>can be found here</u>.

Low risk or with only accepted risks: If your intended project or activity is identified as *low risk*, or with *only accepted risks*, in the initial screening table, **no further CRM screening is required**.

Moderate or high risk: If your intended intervention is identified as moderate or high risk, or not addressed, further CRM screening **is** required, as outlined in <u>Climate Risk Management for</u> USAID Projects and Activities Mandatory Reference for ADS Chapter 201.

To comply with the CRM requirements as part of the SIEE, an Operating Unit must:

- Include a summary of the CRM methodology and the main results of the CRM.
- Include a table as an Annex to the SIEE (using the CRM Table template below, or from <u>Mandatory Reference for ADS Chapter 201</u>)
- Incorporate the results of CRM screenings into solicitations and awards.

CRM Table Template

CRM Table Template - add title here					
Project of activity element	Climate Risks	Risk Rating	How Risks are Addresse d in the project or activity	Next Steps for project/ac tivity design and implemen tation	Accepted Risks and Opportun ities to strengthe n climate resilience